ORIGINAL
FILE

BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON D. C. 20554

In the Matter of	)	
	)	
	)	
Amendment of the Commission's Rules	)	
to Establish New Frequencies	)	RM 8094
for Cordless Telephones near 44 and 49 MHz	)	
	)	

To: The Commission

REPLY COMMENTS

1. The Telecommunications Industry Association (TIA) Personal Communications Section ("the Section") hereby respectfully submits its *Reply Comments* in the above-captioned matter, which was initiated by a *Petition for Rule Making* filed with the Commission by the Section on August 20, 1992.

2. That *Petition* requested that the Commission allow cordless telephones to share, on a secondary basis, fifteen frequency pairs in the Private Land Mobile Radio Service (PLMRS) bands near 44 and 49 MHz. The Section is aware of four sets of *Comments* filed with the Commission on this matter, by Dynascan Corporation's Cobra Electronics Group ("Dynascan"), GTE Service Corporation ("GTE"), Thomson Consumer Electronics, Inc. ("Thomson"), and Uniden America Corporation ("Uniden"). All four sets of *Comments* supported the Section's *Petition*.

3. GTE suggested that the Commission consider the Section's 1990 and 1992 *Petitions* in the same proceeding. However, the Section recognizes that, as a practical matter, its 1992 *Petition* may be more readily implemented, and urges the Commission to focus on it.

4. Thomson, in its *Comments*, expressed a concern regarding the cost of a mechanism to automatically monitor channel occupancy prior to transmission. The Section believes that this is a valid concern, and it warrants some discussion. In its *Petition*, the Section suggested that cordless telephones using the new frequencies be required to include a mechanism for automatically avoiding interference to or from the primary licensees (and other cordless telephones). The Section proposed a wording describing this requirement that is a variation of the Part 90 provision governing internal transmitter control systems. Based on the issue raised by Thomson as well as several internal discussions since the filing of the *Petition*, the Section concurs that the potential may exist for misinterpretation of the proposed wording, which reads, "Cordless telephones using these frequencies must include a mechanism for automatically monitoring, and preventing transmitter activation on, frequencies on which cochannel signals are present."[1]

5. Unlike PLMRS systems, which operate in the simplex (push-to-talk) mode, cordless telephones use duplex transmission. With the existing 46/49 MHz systems, the base unit transmits on 46 MHz and receives on 49 MHz, and the handset does the reverse. Hence, neither a base nor a handset is capable of literally monitoring its own transmit frequency, and requiring it to do so would incur a cost and complexity burden inconsistent with the requirements of the consumer markets for which cordless telephones are designed.

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1. See *Petition* at par. 7, p. 5.

6. To understand what might constitute a practical and effective interference-prevention rule, it is worthwhile to consider the sequence of events that lead to the establishment of a link on a cordless telephone. First, either the handset or the base is activated by an external source (i.e., the base receives ringing voltage from the PSTN, or the customer activates the handset to place a call). The activated unit then must contact its counterpart with a short signaling burst on its own transmit frequency. This must be done without knowledge of whether that frequency is actually in use by another cordless telephone or a PLMRS transceiver.

7. As an example, assume that the base unit receives ringing voltage and attempts to signal the handset on 44.xx MHz. If that channel is already in use, the signaling attempt will be unsuccessful due to the interference with the handset's reception. The base will receive no acknowledgment from the handset and must try again on a different frequency (say 44.yy MHz). Meanwhile, the handset, having detected interference on 44.xx MHz, would likely switch its receiver to a different frequency that is clear, to continue waiting for a signal from the base. Knowing the base unit's receive frequency, it could signal the base that it had switched receive frequencies to 44.yy MHz, thereby avoiding even the potential for the momentary interference on 44.xx MHz. The alternative, of course, is for the base unit to poll frequencies in some predetermined or even random order until it "finds" the handset. In any event, it would seem that any reasonable form of automatic channel selection would prevent interference except for a possible short burst due to signaling. Moreover, due to the low power transmitted by cordless telephones, the likelihood of a PLMRS user suffering perceptible interference even from such a signaling burst is minuscule (see Uniden at par. 6).

8. Hence, the Section proposes the following wording to replace that suggested in paragraph 7 (p. 5) of its *Petition*:

> Cordless telephones using these frequencies must incorporate an

automatic channel selection mechanism which will prevent the establishment of a link on an occupied frequency.

9. Thomson makes a specific proposal that a cordless telephone be required to "monitor the availability of a frequency during the initial one second of transmission."[2] The Section notes that this is one potential specific implementation that would satisfy the general requirement suggested here. Thus, while agreeing with the general intent of Thomson's suggestion, the Section believes that it is unnecessary for the Commission's Rules to include specific implementation requirements.

10. The Section continues to support the need for the additional 44/49 MHz frequencies for cordless telephones requested in its *Petition*, and reiterates its request that the Commission issue a *Notice of Proposed Rule Making* (NPRM) on this matter.

Respectfully submitted,

TELECOMMUNICATIONS INDUSTRY ASSOCIATION

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2. See Thomson, p. 3.

Certificate of Service

I, Lisa Ludwig, hereby certify that a copy of the foregoing "TIA Reply Comments" has been mailed by first class United States mail, postage prepaid on the 16th day of November, 1992 to the following parties.

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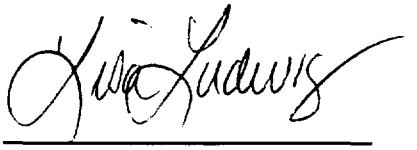

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